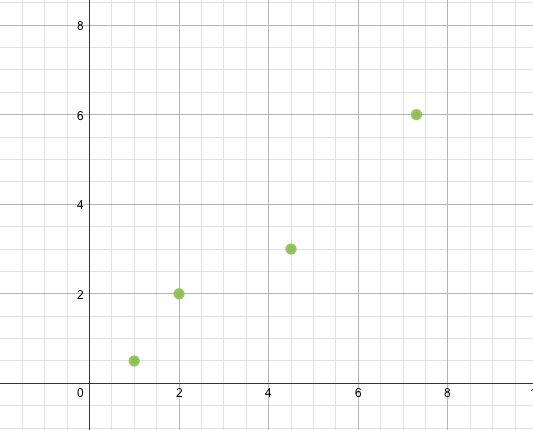
Name:

Date:

***Graphing extravaganza!!!***

The graph shown below has a domain of 1, 2, 4.5, and 7.3.



The graph shown below has a domain of all numbers from -8 to 4.



The graph shown below has a domain of all real numbers greater than 0 or equal to 0.



The graph shown below has a domain of all real numbers less than 4 but not equal to 4.

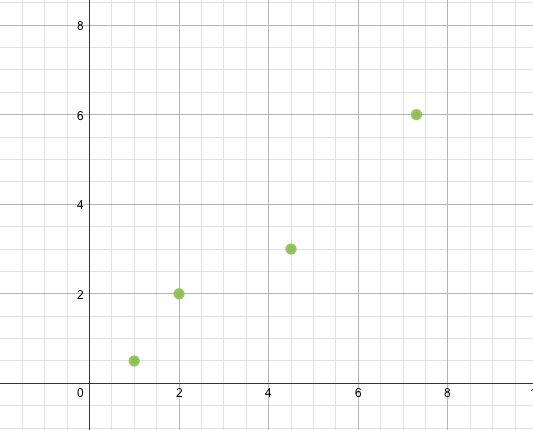


The graph shown below has a domain of all numbers from 4 to 10, including 4 but not including 10.



Define **domain** in your own words.

The graph shown below has a range of ½, 2, 3, and 6.



The graph shown below has a range of all numbers from -1 to 1.



The graph shown below has a range of all numbers greater than and including -1.



The graph shown below has a range of all numbers.



The graph shown below has a range of all numbers from -6 to 6.



Define **range** in your own words.

The graph shown below has decreasing intervals from *x* = –∞ to -0.25 and from *x* = 0.9 to 3.6 and increasing intervals from *x* = -0.25 to 0.9 and *x* = 4.6 to +∞.



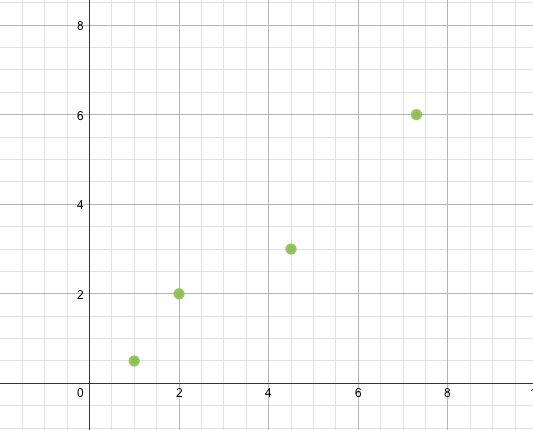
The graph shown below has a decreasing interval from *x* = 0 to 0.9 and an increasing interval from *x* = 0.9 to ∞.



The graph shown below has decreasing intervals from *x* = 4 to 4.5 and x = 7.6 – infinity and an increasing interval from *x* = 4.5 to 7.6.



Define **increasing interval** and **decreasing interval** in your own words.The graph shown below has neither *x*- nor *y*-intercepts.



The graph shown below has *x*-intercepts at -6.7, -3.5, 0, and 3.2 and a *y*-intercept at 0.



The graph shown below has *x*-intercepts at 0 and 1.5 and a *y*-intercept at 0.



The graph shown below has and *x*-intercept at 1.8 and a *y*-intercept at 1.



Define **intercept** in your own words.

From what you know about a function, can a function have more than one *x*-intercept? Can it have more than one *y*-intercept? Justify (defend) your answer. You may want to draw a picture to support your answer.The graph shown below has end behavior of down, down.



The graph shown below has end behavior of up, up.



The graph shown below has end behavior of up, up.



The graph shown below has end behavior of up, down.



Define **end behavior** in your own words.The graph shown below has a relative maximum value of *y* = 1 and a relative minimum value of *y* = -1.



The graph shown below has a relative minimum value of *y* = -1 and no relative maximum value.



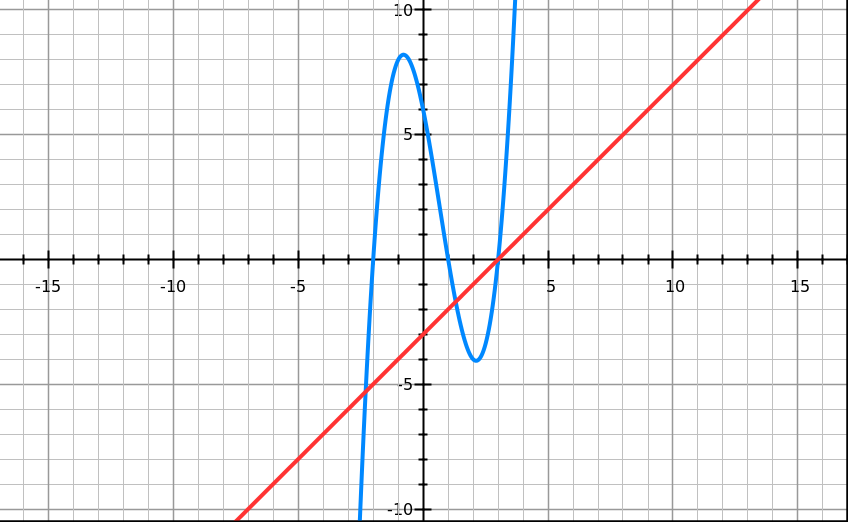
The graph shown below has a relative minimum value of *y* = -10.1 and a relative maximum value of *y* = 1.8.



The graph shown below has a relative minimum value of *y* = -5 and a relative maximum value of *y* = 5.



Define **relative maximum** and **relative minimum** in your own words.Of the graphs shown below, let *f(x)* be the blue curve and *g(x)* be the red line.



Statement I:

*g(x)* > *f(x)* for values of *x* from x=-∞ to x= -2.3 and for values of *x* from x=1.2 to x=3.

Statement II:

*g(x) < f(x)* for values of x from *x*=-2.3 to x=1.2 and for values of *x* from x=3 to x=∞.

Statement III:

*f(x) = g(x)* for *x* = 3.

Define in your own words what the previous three statements mean.

Statement I: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Statement II: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Statement III: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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